

KHODCHENKOV, A.N.; GRECHKO, M.K.; VILENSKIY, Yu.B.; AL'PEROVICH, M.A.

Effect of the duration of chemical ripening on the optical sensitization of emulsions. Zhur. nauch. i prikl. fot. i kin. 8 no.3:167-173 My-Je '63. (MIRA 16:6)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofoto-instituta, Shostka.
(Photographic emulsions)

AL'PEROVICH, M.A.; GRECHKO, M.K.; NAUMOV, Yu.A.

Photographic properties of cis- and trans-isomers of
distyryl thiocarbocyanines. Zhur. nauch. i prikl. fot. i
kin. 8 no.6:410-415 N-D '63. (MIRA 17:1)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofoto-
instituta, Shostka.

ACCESSION NR: AP4026815

S/0077/64/009/002/0090/0092

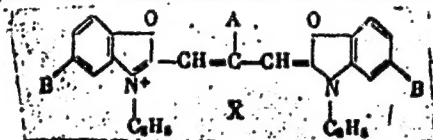
AUTHORS: Al'perovich, M. A.; Groshko, M. K.; Bogolyubskaya, L. T.

TITLE: Photographic properties of oxacarboyanines with α -naphthyl and α -thienyl groups in positions 5,5'

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 9, no. 2, 1964, 90-92

TOPIC TAGS: photography, photographic emulsion, color sensitizing, sensitizing dye, cyanine, carboyanine, oxacarboyanine, naphthyl group, thienyl group, polymethine chain, meso-methyl derivative, meso-ethyl derivative

ABSTRACT: Tests were conducted on the sensitivity to light and fog density of emulsions containing one millionth of a mole of the sensitizing dyes per mole of silver halide. Their absorption spectra were measured by means of an SF-2M spectrophotometer. The dyes were derivatives of oxacarboyanine of the formula



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ACCESSION NR: AP4026815

where A in the methine chain was substituted by H, CH₃, or C₂H₅, while B was substituted by H, C₆H₅, α -C₁₀H₇, or α -C₄H₃S. It was found that in the series of dyes with non-substituted methine groups the 5,5'-diphenyl-, and especially the 5,5'-di- α -naphthyloxacarbocyanines (unlike the corresponding di- α -thienyl derivative) are more effective sensitizers than the simplest dye of this range. In shifting from the nonsubstituted methine group dyes to the meso-alkyl-substituted ones, with phenyl and α -thienyl groups in positions 5 and 5', a sharp increase in effectiveness was observed. The spectrophotometric curves revealed that the ethylates of the 9-ethyl-5,5'-di- α -thienyloxacarbocyanine and of the 9-ethyl-5,5'-diphenyloxacarbocyanine, unlike the corresponding derivatives of a nonsubstituted methine chain dye, possess a pronounced tendency to the formation of I-aggregates. Orig. art. has: 1 chart, 1 table, and 1 formula.

ASSOCIATION: Filial NIKFI Shostka (Division of NIKFI)

SUBMITTED: 05Nov62

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: PG

NO REF SOV: 003

OTHER: 005

Card 2/2

GRECHKO, M.K.

Causes of the specific characteristics of the J-state formation
in dyes on the microcrystals of various emulsions. Zhur. nauch.
i prikl. fot. i kin. 10 no.2:116-118 Mr-Apr '65.

(MIRA 18:5)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofoto-
instituta, Shostka.

GRECHKO, N.

GRECHKO, N.; KARACHEVTSEVA, A.

Color stabilisation in beef fat. *Mias. Ind. SSSR*. 25 no.3:51-52
'54. (MLRA 7:7)

1. Pyatigorskiy myasokombinat.
(Oils and fats)

TOCHILIN, M.S., prof., otv. red.; GRECHKO, V.A., red.

[Flotation of Olenogorsk deposti iron oxides] Flotatsiia
okislov zheleza Olenegorskogo mestorozhdenia. Apatity,
1961. 83 p. (MIRA 15:4)

1. Akademiya nauk SSSR. Kol'skiy filial, Kirovsk.
(Olenogorsk—Iron oxides) (Flotation)

SHLYAKOV, R.N.; SAVICH-LYUBITSKAYA, L.I., prof., otv. red.; GRECHKO,
V.A., red.; MERKUR'YEV, V.I., red.izd-va; BELYAYEV, N.F.,
tekhn. red.

[Flora of frondiferous mosses of the Khibiny Mountains] Flora
listostebel'nykh mkhov Khibinskikh gor. Murmansk, Murmanskoe
knizhnoe izd-vo, 1961. 249 p. (MIRA 16:6)
(Khibiny Mountains--Mosses)

KAMSHILOV, M.M., doktor biol. nauk, otv. red.; GRECHKO, V.A., red.;
FEDOTOVSKIY, A.N., red.; BELYAYEV, N.F., tekhn. red.

[Hydrological and biological characteristics of the waters
along the Murman Coast] Gidrologicheskie i biologicheskie
osobennosti pribrezhnykh vod Murmana. Murmansk, Murman-
skoe knizhnoe izd-vo, 1961. 237 p. (MIRA 16:5)

1. Akademiya nauk SSSR. Kol'skiy filial, Kirovsk. 2. Kol'skiy
filial Akademii nauk SSSR (for Grechko).
(Barents Sea—~~Marine~~ biology)

TSUKERBERG, Solomon Maksimovich; ZAKHAROV, Sergey Petrovich; NENAKHOV,
Boris Viktorovich; ABRAMOVA, Ella Yefimovna; GRECHKO, V.M.,
red.; DONSKAYA, G.D., tekhn.red.

[Tires for increasing the roadability of automobiles] Shiny,
povyshaiushchie prokhodimost' avtomobil'ov. Moskva, Nauchno-tekhn.
izd-vo M-va avtomobil'nogo transporta i shosseinykh dorog RSFSR,
1959. 43 p. (MIRA 12:12)

(Automobiles--Tires)

ROG, Viktor Abramovich; GRECHKO, V.M., red.; LAKHMAN, F.Ye., tekhn.red.

[Technical inspection in automobile repairing] Tekhnicheskii
kontrol' v avtoremontnom proizvodstve. Izd. 2., perer. Moskva,
Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh
dorog RSFSR, 1959. 141 p. (MIRA 12:6)
(Automobiles--Repairing)

IZMAIKOV, Vasil'yevich, shofer; GHECHKO, V.M., red.; DONSKAYA, G.D., tekhn.red.

[Reducing the cost of automotive transportation] Snizhenie sebestoimosti avtomobil'nykh perevozok. Lit.zapis' M.S.Blantera. Moskva, Nauchno-tekhn.isd-vo M-va avtomobil'nogo transporta i shosseinykh dorog RSFSR, 1960. 39 p. (MIRA 13:6)

1. Podol'skaya avtokolonna No.28 Ministerstva avtomobil'nogo transporta i shosseynykh dorog RSFSR (for Izmailkov).
(Transportation, Automotive--Cost of operation)

NICHEGO, V.M., shofer; CHAPLIYEV, V.G., shofer; GRECHKO, V.M., red.; DON-SKAYA, G.D., tekhn. red.

[The MAZ-200V tractor drives two trailers] MAZ-200V vedet dva pritsepa. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 39 p. (MIRA 14:8)

1. Avtokombinat Glavmosavtotransa (for Nichego, Chapliyev)
(Motortrucks)

INDIKT, Yefim Aleksandrovich; SOBOLEV, Viktor Pavlovich; GRECHKO,
V.M., red.; NIKOLAYEVA, L.N., tekhn. red.

[Automatic line for washing trucks] Avtomaticheskaya liniya
moi ki gruzovykh avtomobilei. Moskva, Nauchno-tekhn. izd-vo
M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1960.
43 p. (MIRA 15:3)

(Motortrucks—Cleaning)

GRECHKO, V.P.

GRECHKO, V.P.: "The deformability of steel when rolled with great pressure with the angles of attack exceeding the angles of friction ($\alpha > \beta$)". Dnepropetrovsk, 1955. Acad Sci Ukrainian SSR, Inst of Ferrous Metallurgy. (Dissertations for the Degree of Candidate of Technical Sciences).

SO: Knizhnaya letopis' No 45, 5 November 1955. Moscow.

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 220 (USSR) SOV/137-57-6-10934

AUTHORS: Chekmarev, A.P., Yefimov, V.A., Grechko, V.P., Filichkin, I.F.

TITLE: The Effect of Aluminum Upon the Plastic Properties of Steel at High Temperatures (Vliyaniye alyuminiya na plasticheskiye svoystva stali pri vysokikh temperaturakh)

PERIODICAL: V sb.: Vopr. proiz-va stali. Nr 4. Kiyev, AN UkrSSR, 1956, pp 126-128

ABSTRACT: An investigation is made of billets 90 mm in diameter and 300 mm long made of Nr 3T furnace steel melted in a basic open hearth and of rail steel melted in the Bessemer converter. The process of de-oxidation of the experimental heats is modified by addition of 725-2000 g Al in the ladle per t of Nr 3T steel, and 275-1000 g per t of rail steel. Three samples are taken of each of the six heats of this grade. Two of the samples are rolled while a section is cut from the third for study of the nature of the disposition of nonmetallic inclusions and the size of the austenite grain. Determination of the ductility (D) of the metal is by rolling on the collar. The D criterion is taken to be the magnitude of relative deformation at which cracks

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SOV/137-57-6-10934

The Effect of Aluminum Upon the Plastic Properties of Steel at High Temperatures

appear in the side surfaces of the rolled strip, i.e., $U = (H-h/H) \cdot 100$, where U is the D limit, and H and h are respectively the initial and final heights of the sample. It is found that Nr 3T steel shows its lowest D limit on addition of 800 g Al/t. The maximum D for this steel is obtained on addition of 1250 g Al/t. In this case, damage to continuity sets in upon 75-88% reduction per pass. Rail steel has its maximum D when it is deoxidized by 450 g Al/t. It is found that upon small additions of Al the oxysulfides take the form of separate accumulations and thus result in steel of satisfactory ductility. When the amount of Al rises to critical, the sulfides come down as chains or films which, creating weak spots in the metal, sharply reduce the D of the steel. It is also established that upon rolling the highest D is that of specimens in which the native austenite grain is small. The lowest D indices are those of specimens with medium-sized austenite grains.

L.G.

Card 2/2

Grechko, V. P.

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Influence of macrostructure on the plasticity of steel.
A. P. Chekmarev, A. A. Dinik, V. P. Grechko, I. F.
Ruchanin, and N. M. Danilchenko. ~~Met~~ 16, 235-40
(1956). For checking the necessity of light passes in bloom-
 ing tender ingots, 3 ingots of 0.50% C rail steel and of
 0.18 C-0.61 Mn open steel were bloomed down and one of
 each was cut into slabs contg. ingot skin, dendritic layer, or
 equiaxial crystals of ingot core. Blooms were then forged
 down to the dimensions of these slabs, and all of them were
 rolled after proper heating in one pass into wedges in an
 eccentric mill with a max. reduction of 83%. Studying
 reductions necessary for crack formation permitted the
 conclusion that the macrostructure of the steel has no effect
 whatever on its plasticity characteristics, and cracking,
 when occurring, was caused by surface defects. J. D. Gar

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Grechko, V. P.

137-1958-2-2779

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 82 (USSR)

AUTHORS: Chekmarev, A. P., Filipov, S. N., Dinnik, A. A., Grechko, V. P.

TITLE: Investigation of the Conditions of Rolling Seizure in the Presence of a Fully Developed Deformation Area, That Is, in a Stationary Rolling Process [Issledovaniye usloviy zakhvata pri zapolnennom ochage deformatsii (ustanovivshiysya protsess prokatki)]

PERIODICAL: Tr. In-ta chernoy metallurgii AN UkrSSR, 1957, Vol 11, pp 3-17

ABSTRACT: Pb samples were rolled experimentally on laboratory mill 150 on flat rolls allowing free spreading, the aim being to determine the coefficient of friction (FC) at inception of seizure and when the focal deformation area has been fully engaged. The FC at the moment of seizure, f_{seiz} , is determined from the limiting angle (SA) (corresponding to a fully developed focal deformation area) by means of rolling wedge-shaped specimens. The determination of the FC and possible SA's on the hot rolling of steel were performed in the two-high stand of experimental mill 180. It was found that when $v = 0.23$ m/sec and the temperature was 1160-1180°, for steel st. 3, the limiting SA was $\alpha_{seiz} = 24^\circ$ and $f_{seiz} = 0.44$.

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137-1958-2-2779

Investigation of the Conditions of Rolling Seizure (cont.)

The SA and the FC that correspond to a loss of stability of the rolling process, were determined by means of either of two methods in the rolling of wedge-shaped specimens: a) from the appearance of the first traces of slipping on the contact surface of the rolled samples, and b) from the roll separating pressure of the metal. Dynamometer readings were recorded on moving-picture film with the aid of an MPO-2 oscillograph. The effect of furnace scale on the FC and maximum SA of the stationary process was ascertained by rolling wedge-shaped samples with and without surface scaliness. Efforts to determine the FC in the presence of scale for the stationary rolling process were unsuccessful, however, because at the smallest reduction value

$\Delta h = 11 \text{ mm}$ the slipping process and the FC corresponding to total slippage were in the main unaffected by the presence or absence of scale. When scale was present, $f_{\delta} = 0.35 - 0.36$; when scale was absent, $f_{\delta} = 0.35 - 0.40$. The experiments showed that in the presence of a fully developed deformation area the furnace scale does have a decisive effect on the FC and on the stability of the rolling process. It is established that the scale exerts but an insignificant effect on the incipient rolling seizure, the FC, and the maximum SA in conditions of total slippage. In the presence

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137-1958-2-2779

Investigation of the Conditions of Rolling Seizure (cont.)

of a fully developed deformation area the scale decreased the FC by 50-60 percent, creating a broad range in which the rolling operation was unstable, this range extending from SA's smaller than the angles of friction at the inception of seizure ($\alpha = 24^\circ$) to SA's equal to the angle at which slippage became total $\alpha_{cr} = 39^\circ - 40^\circ$. The scale exhibited a significant influence on the degree of spreading that occurred and on the elongation ratio.

B. Ye.

1. ~~Steel--Rolling--Friction--Analysis~~

Card 3/3

GRECHKO V.P.

137-58-5-9469

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 94 (USSR)

AUTHOR: Dinnik, A. A., ~~Grechko, V. P.~~

TITLE: The Effect of Large Rolling Reductions on the Mechanical Properties of Steel (Vliyanie bol'shikh obzhatiy pri prokatke na mekhanicheskiye svoystva stali)

PERIODICAL: Tr. In-ta chernoy metallurgii. AN UkrSSR, 1957, Vol 11, pp 125-129

ABSTRACT: Rolling with large reductions with $\alpha > \beta$ angles does not impair the mechanical properties of low-carbon steels ($\sigma_s, \sigma_b, \delta, \psi, a_k$), neither does it enhance anisotropy of properties. Certain mechanical properties are actually somewhat improved under conditions of large reduction than under moderate breakdown schedules. Therefore, from the viewpoint of strength, plastic, and viscous properties of metal, large reductions are entirely rational in the rolling of low-carbon steels.

V. D.

1. Steel--Mechanical properties 2. Steel--Processing

Card 1/1

SOV/137-58-9-18957

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 114 (USSR)

AUTHORS: Chekmarev, A.P., Dinnik, A.A., Grechko, V.P.

TITLE: The Deformability of Steel When Rolled at High Draft (Deformiruyemost' stali pri prokatke s bol'shimi obzhatiyami)

PERIODICAL: V sb.: Prokatn. i trubn. proiz-vo, Moscow, Metallurgizdat, 1958, pp 75-92

ABSTRACT: Certain problems of the plasticity of metal when rolled at high drafts with an angle of contact greater than the angle of friction ($\alpha > \beta$) are presented. Analysis of the stressing of the deformed metal rolled with $\alpha > \beta$ shows that the stresses vary from point to point and that their distribution is dependent upon the conditions of reduction. In view of the unevenness of deformation and the influence of the exterior zones, new stresses appear in addition to the basic ones. In cases of rolling with high drafts and at $\alpha > \beta$ angles on merchant and billet mills, the ratio of the contact arc to the height of the strip is adequate, and it may be taken that the full thickness of the strip is subjected to working. The experimental portion of the work sets forth the results of experiments in determination of the stress

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SOV/137-58-9-18957

The Deformability of Steel When Rolled at High Draft

pattern of the metal in the contact area when $\alpha > \beta$. The hypothesis to the effect that a longitudinal tensile stress exists in the inlet portion of the contact area is confirmed. The rolled metal and low- and high-carbon steels are shown to be highly plastic. In the rolling of billets of large cross section, no breaks in the continuity of the metal due to the process of deformation are found. Experiments reveal the metal to be of high density across its entire section when it is rolled at high draft, and this has a favorable effect upon the mechanical properties of the metal. Analysis of experimental data shows that when rolling is done at high drafts, no further opening of cracks at the start of the contact area, where a different pattern of stresses is operative, occurs. Moreover, as a result of the high level of reduction in height per pass and the considerable body forces of compression in the field of the β angle, conditions for the welding of defects are created in the contact zones of the strip, it being understood that this holds under conditions of absence of nonmetallic inclusions and oxidation of the surface at the loci of crack formation. Therefore the frequent turning manipulation required in large-draft rolling owing to the conditions involved in forming the desired section make for the production of high-quality rolled product. 1. Rolling mills--Performance 2. Steel--Deformation 3. Stress analysis B.Ts.

Card 2/2

SOV/137-58-12-24416

Translation from: Referativnyy zhurnal. Metallurgiya. 1958, Nr 12, p 67 (USSR)

AUTHOR: Grechko, V. P.

TITLE: The Quality of Rolled Metal at Large Drafts (Kachestvo prokata pri bol'shikh obzhatiyakh)

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu. "Sovrem. dostizh. prokatn. proiz-va". Leningrad, 1958, pp 122-125

ABSTRACT: It is shown that under conditions in which $\alpha > \beta$ the pattern of stresses in the metal (Me) being rolled differs at the start of the contact area and at its edges, and that longitudinal tensile stresses develop therein. It is established that the mechanical properties of Me rolled under these conditions are superior. The deformed Me of low and medium carbon St may be reduced by as much as 70-75% in a single pass without damage. It is observed that when the reduction ratio is increased to the order of 75% the degree of rolling-out in the blanking-off of external defects in the direction of upsetting must be increased up to 12 times.

M. Z.

Card 1/1

KARP, S.F.; GRECHKO, V.P.

Effect of the deoxidation method of M16C steel on its plasticity
in the hot state and its impact toughness. Vop.proizv.stali
no.8:48-54 '61.

(MIRA 14:6)

(Steel--Metallurgy)

S/524/61/015/000/001/002
2217/0504

AUTHORS:

Chekmarev, A.P., Academician of the AS UkrSSR, and
Grechko, V.P., Candidate of Technical Science

TITLE:

Investigating the parameters of continuous rolling
under tension

SOURCE:

Akademiya nauk Ukrayins'koyi RSR. Institut chornoyi
metalurhiyi. Trudy. v. 15. 1961. Zakatnoye proiz-
vodstvo. no. 3, 125 - 136

TEXT:

The experiments were carried out in the first two
stands of the experimental three-stand continuous mill 180 of the
Institut chernoy metallurgii AN USSR (Institute of Ferrous Metall-
urgy AS UkrSSR). The rolls of the first stand are vertical, and
those of the second horizontal. The stands were individually pow-
ered and the speed of revolution could be regulated. The mill was
provided with electric measuring instruments for measuring pressure
exerted by the metal on the rolls, torque, tension and support of

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3/524/61/015/000/001/002
B217/D304

Investigating the parameters ...

the strip. The experimental dependences of roll pressure and of the torque on the tension in the strip under conditions of rolling in plain rolls, were obtained. The influence of tension in the strip, on the components of the resultant force was studied. It was found that under conditions of tension the direction of the resultant force influences the change of the components more effectively than the displacement of the resultant. The graphs given in the article can be applied in connection with rolling in plain rolls in the investigated range of tension, if the ratio between length of grip arc and average strip length used in the experiments is employed. There are 12 figures and 1 table.

Card 2/2

S/524/61/015/000/002/002
D217/D304

AUTHORS: Chekmarev, A.P., Academician of the AS UkrSSR, and
Grechko, V.F., Candidate of Technical Sciences

TITLE: Influence of tension on the pressure exerted by the
metal on the rolls in the rolling of strip

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut chornoyi
metaluriiyi. Trudy. v. 15, 1961, Irokatnoye proiz-
vodstvo. no. 5, 137 - 143

TEXT: The experiments were carried out in the first two
stands of the continuous three-stand mill 180 of the Institut chernoy
metallurgii AN USSR (Institute of Ferrous Metallurgy AS UkrSSR). The
position of the rolls in the first stand was vertical, and in the se-
cond, horizontal. The stands were individually powered and the speed
of revolution could be regulated. The mill was provided with electric
measuring instruments for measuring pressure exerted by the metal on
the rolls, of the tension and support of the strip. Billets were heat-

Card 1/2

Influence of tension ...

S/524/61/015/000/002/002
D217/D304

ed in a gas-fired kiln. The rolling temperature was maintained at 1100°C and was measured by means of an optical pyrometer. Tension was induced in the strip by changing the speeds of revolution of the rolls in the separate stands. The roll speeds were maintained between 0.1 and 0.15 m/sec.. The roll diameter in the first stand was 160 mm, and in the second stand 174 mm. It was found that a slight reduction of the pressure exerted by the metal against the rolls (2 - 10 % under the experimental conditions) occurs under conditions of tension, essentially as the result of a decrease of specific pressure. The lateral spread also decreases. The values (experimental and calculated) for the mean specific pressure coincide closely with each other, which enables A.I. Tsolikov's formula for calculating mean specific pressures to be applied under conditions close to those used in the author's experiments. On increasing the tension (front rear) the elongation of the strip increases, mainly as a result of the decrease in lateral spread. There are 3 figures, 3 tables and 1 Soviet-bloc reference. ✓

Akademiya Nauk USSR

Card 2/2

GRECHKO, V.P., kand.tekhn.nauk; KUTSYGIN, M.D., inzh.

Effect of strip tension on the rolling pressure. Trudy Inst.
chern. met AN URSR 17:31-37 '62. (MIRA 15:10)
(Rolling (Metalwork))

GRECHKO, V.P., kand.tekhn.nauk; KUTSYGIN, M.D., inzh.

Arm of the resultant in rolling with tension. Trudy Inst.
chern. met. AN URSR 17:38-44 '62. (MIRA 15:10)
(Rolling mills)

GRECHKO, V.V.

Main historical and geographical factors in the development of
cotton growing in Kirghizstan. Izv. AN Kir. SSR. Ser. est.
i tekhn. nauk 3 no.5:47-53 '61. (MIRA 15:9)
(Kirghizstan—Cotton growing)

GRECHKO, Vsevolod Vasil'yevich; OTORBAYEV, K.O., otv. red.; ANOKHINA,
M.G., tekhn. red.

[Agriculture in Osh Province; economic and geographic
characteristics] Sel'skoe khoziaistvo Oshskoi oblasti; ekono-
miko-geograficheskaya kharakteristika. Frunze, Izd-vo Akad.
nauk Kirgizskoi SSR, 1962. 73 p. (MIRA 15:9)
(Osh Province--Agriculture)

GRECHKO, V.V.
GRECHKO, V.V.

Biosynthesis of carnosine in vivo and in vitro [with summary in English]. Biokhimiia 22 no.4:7360743 J1-Ag '57. (MIRA 10:11)

1. Kafedra biokhimii zhivotnykh Moskovskogo gosudarstvennogo universiteta.

(CARNOSINE, metabolism,
biosynthesis in vivo & in vitro (Rus))

GRYCHKO, V.V., Cand Bio Sci—(dies) " Biosynthesis of carnosine in vivo and in vitro." Mos, 1958. 12 pp (Mos Order of Lenin and Order of Labor Red Banner State U in Lomonosov), 150 copies (KL,45-58, 144)

- 50 -

GRECHKO, V.V.; SEDOVA, T.S.

Preparation and properties of I^{131} -labeled antigens of dysentery
bacteria. Biokhimiia 24 no.5:858-865 S-O '59. (MIRA 13:2)

1. Otdel radiatsionnoy mikrobiologii i immunologii Instituta epidemio-
logii i mikrobiologii im. N.F. Gamaleya Akademii meditsinskikh nauk,
SSSR, Moskva.

(SHIGELLA immunol.)

(ANTIGENS)

(IODINE radioactive)

GRECHKO, V.V. (Moskva)

β -alanine metabolism and biosynthesis of carnosine. Usp.sovr.biol.
47 no.1:38-48 Ja-F '59. (MIRA 12:2)

(ALANINE, metab.

β -alanine, relation carnosine synthesis, review (Rus))
(CARNOSINE, metab.

biosynthesis, role of β -alanine, review (Rus))

17(2)

SOV/16-60-3-7/37

AUTHORS: Sedova, T.S., Grechko, V.V.

TITLE: Experience With the Use of Radioactive Sulfur for Preparing Labeled Bacteria

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, Nr 3, pp 31 - 35 (USSR)

ABSTRACT: The aim of the work was to prepare *Shigella dysenteriae* antigen labeled with sulfur, derived from bacteria containing radioactive sulfur (S^{35}). This was achieved by culturing the bacteria on medium containing sulfur isotope in the form of various compounds. The tests were conducted with *Shigella flexneri* and showed that it is quite possible to prepare labeled bacteria with a high specific radioactivity by using methionin, cystein and Na_2SO_4 containing radioactive sulfur. Best results were obtained with the special semi-synthetic medium developed by L.G. Ivanova, N.V. Ploskirev and V.F. Grebenkina and which contained no soluble sulfur compounds. The medium contained radioactive sulfur in the form of methionin S^{35} , cystein S^{35} and $Na_2S^{35}O_4$. The addition of any further sulfurous compounds to the medium was unnecessary. The resulting labeled bacteria can be used to

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SOV/16-60-3-7/37

Experience With the Use of Radioactive Sulfur for Preparing Labeled Bacteria

prepare antigens whose structure contains sulfurous amino acids. The authors point out that further work is required to check the stability of the bond between the radioisotope, on the one hand, and the bacterial cell or the molecule of the antigens derived from it, on the other. There are: 3 tables, 1 graph and 8 references, 1 of which is Soviet, 6 English and 1 French.

ASSOCIATION: Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR
(Institute of Epidemiology and Microbiology imeni Gamaleya of the
AMN, USSR)

SUBMITTED: July 10, 1959

Card 2/2

GRECHKO, V.V.; SEDOVA, T.S.

Fate of I^{131} -labeled antigens of dysenterial bacilli after oral
administration in animals. Zhur.mikrobiol.epid.i immun. 31 no.11:
117-122 N '60. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN
SSSR.

(SHIGELLA) (IODINE—ISOTOPES)
(ANTIGENS AND ANTIBODIES)

GRECHKO, V.V.

Formation of double and triple β -alanine spots in paper chromatography. Biul. eksp. biol. i med. 49 no. 6:113-114 Je '60. (MIRA 13:8)

1. Iz kafedry biokhimii zhivotnykh (zav. - deystv. chlen AMN SSSR S.Ye. Severin) Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova. Predstavlena deystv. chlenom AMN SSSR S.Ye. Severinym.
(ALANINE) (CHROMATOGRAPHIC ANALYSIS)

GRECHKO, V.V.; SHKARENKOVA, L.S.; VARSHAVSKIY, Ya.M.

Heat denaturation of DNA in heavy water. Biokhimiia 28 no.6:1059-1064
N.D'63 (MIRA 1711)

1. Institute of Radiation and Physical-Chemical Biology,
Academy of Sciences of the U.S.S.R., Moscow.

GRECHKO, V.V.; MASLOVA, R.N.; SHKARENKOVA, L.S.; SILINA, Ye.I. [deceased];
~~VARSHAVSKIY, Ya.M.~~

Effect of heavy water on the properties of DNA and proteins. Dokl.
AN SSSR 152 no.3:740-743 S '63. (MIRA 16:12)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR.
Predstavleno akademikom V.A.Engel'gardtom.

*

FAV-1, V.I.;, V.I.; KOVALEVA, G.R.; KERNIGOV, R.M.

Formation of G¹⁴-alanyl-RNA in the presence of cycloserine and its analogs. Biochimika 30 no.5:1015-1020 S-O '65.

(MIRA 18:10)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR,
Moskva.

SHEVCHENKO, N.V., red.; AMELIN, F.S., red.; GRECHKO, V.Ye., red.; ISAYEV, V.I., red.; KUZUBOV, V.I., red.; LIBERMAN, Ye.G., prof., doktor ekonom.nauk, red.; MAKARENKO, V.P., red.; SHCHERBININ, I.F., red.; YARMOLOVICH, O.M., red.; KARDASH, G.I., red.; DONSKOY, Ya.Ye., red.; LIMANOVA, M.I., tekhn.red.

[First and foremost; ways to further increase labor productivity in machinery manufacturing enterprises of Kharkov] Samoe vazhnoe, samoe glavnoe; o putiakh dal'neishego povysheniya proizvoditel'nosti truda na mashinostroitel'nykh predpriyatiyakh Khar'kova. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1960. 205 p.

(MIRA 13:11)

1. Ukraine. Khar'kovskiy gorodskoy ekonomicheskoy administrativnyy rayon. Sovet narodnogo khozyaystva. 2. Nachal'nik tekhnicheskogo otdela Khar'kovskogo sovnarkhoza (for Kuzubov). 3. Khar'kovskiy inzhenerno-ekonomicheskoy institut (for Liberman).
(Kharkov--Machinery industry--Labor productivity)

GRECHKO, V.Ye.; AVERBAKH, F.A., kand.med.nauk

Disturbances of the optic nerve in multiple sclerosis and their influence on work capacity. Vrach. delo no.2:87-91 F '61.

(MIRA 14:3)

1. Tsentral'nyy nauchno-issledovatel'skiy institut ekspertizy trudosposobnosti i organizatsii truda invalidov i klinika nervnykh bolezney Vtorogo Moskovskogo meditsinskogo instituta.

(MULTIPLE SCLEROSIS)

(OPTIC NERVE--DISEASES)

(DISABILITY EVALUATION)

GRECHKOV, V. Ye., Cand. Med. Sci., -- (diss) "Medico-labor expert examination during the diffusion of sclerosis," Moscow, 1961, 16 pp (Second Moscow Medical Institute im. N. I. Pirogov), 250 copies (KL-Supp 9-61, 189)

GRECHKO, V.Ye.

Diagnostic significance of specific reactions in multiple sclerosis. Zhur. nevr. i psikh. 60 no.3:292-300 '60. (MIRA 14:5)

1. Nevrologicheskoye otdeleniye (nauchnyy rukovoditel' - prof. N.K. Bogolepov) Tsentral'nogo nauchno-issledovatel'skogo instituta ekspertizy trudosposobnosti i organizatsii truda invalidov, Moskva.
(MULTIPLE SCLEROSIS)

GRECHKO, V.Ye.

Expert disability evaluation of patients with multiple sclerosis.
Zhur. nevr. i psikh. 60 no.11:1467-1473 '60. (MIRA 14:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut ekspertizy
trudosposobnosti i organizatsii truda invalidov (dir. - prof.
D.I.Gritskevich, nauchnyy rukovoditel' - prof. N.K.Bogolepov),
Moskva.
(MULTIPLE SCLEROSIS) (DISABILITY EVALUATION)

GRECHKO, V.Ye.

Study of Charpentier's phenomenon in multiple sclerosis.
Zhur. nevr. i psikh 61 no.8:1150-1152 '61. (MIRA 15:3)

1. Nevrologicheskoye otdeleniye (nauchnyy rukovoditel' - prof.
N.K. Bogolepov) Tsentral'nogo nauchno-issledovatel'skogo
instituta ekspertizy trudosposobnosti i organizatsii truda
invalidov, Moskva.

(MULTIPLE SCLEROSIS)
(PHENOMENOLOGICAL PSYCHOLOGY)

KORSUNSKIY, M.I.; GRECHKO, Ye.A.; KHRUL', A.I.

Dependence of the relaxation time of the anomalous
photoconductivity of selenium on the wavelength, and the
electron bonding energy in long-lived traps. Izv. AN
Kazakh. SSR. Ser. fiz.-mat. nauk no. 2:14-18 '63.
(MIRA 17:6)

3(7)

AUTHORS: Sapozhnikov, V. I., Grechko, Ye. S. SOV/50-59-1-8/20

TITLE: The Forecast of the Water Inflow to the Reservoir of the Volga Hydroelectric Power Station imeni V. I. Lenin According to Corresponding Discharges and Intermediate Inflow (Prognoz pritoka v vodokhranilishche Volzhskoy GES imeni V. I. Lenina po sootvetstvennym raskhodam i promezhutochnomu pritoku)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 1, pp 40-44 (USSR)

ABSTRACT: There is a close connection, permitting the forecast of the supply of high waters, between the discharges at upper measuring points on the same isochrone and the discharge at a lower measuring point. With the length of the period for which the forecast is made, the intermediate inflow, i.e. the inflow from the moment of forecasting until the realization of the forecast, increases in importance. As the measuring points do not always lie on an isochrone to the lower measuring point, one can also work with equidistant measuring points, particularly in case of rivers in level country with an almost constant velocity of flow.

Card 1/2

GRECHKOVSKIY, Yu.S. (Tikhoretsk).

Graphic method for selecting artesian pumps.
no.6:17-18 Je '57.

Vod.i san.tekh.
(MLRA 10:7)

(Pumping machinery)

GRECHNEVA, L.V.

ZHUKOV, H.M.; GRECHNEVA, L.V.; KAZAKOVA, A.G.

Result of mass two-stage therapy of ascariasis. Med. paras. i paras.
bol. no.2:120-124 Ap-Je '54. (MLRA 7:8)

1. Iz protivomalyariynoy stantsii, sanitarno-epidemiologicheskoy
stantsii i detskogo sanatoriya Vrachebno-sanitarnogo otdela
Moselektrotyagstroya Ministerstva putey soobshcheniya SSSR.
(ASCARIASIS, in infant and child,
*ther., two-stage mass ther.)

GRECHNIKOV, I., brigadir vagranshchikov

A great and most important task. Sov.profsoiuzy 7 no.3:7-9 7 '59.
(MIRA 12:3)

1. Chlen tsekhovogo komiteta, TSekh kovkogo chuguna Gor'kovskogo zavoda.
(Gorkiy--Smelting)

66300

SOV/136-59-11-12/26

18.6100

AUTHORS:

Deryagin, B.V., Yermine, V.N., Grechnevuk, R.L.,
Zakhavayeva, N.N., Filippovskiy, V.V., Funke, V.F.
and Lopatina, A.M.

TITLE:

Determination of the Specific Surface Area of Powders
in the Production of Hard Alloys

PERIODICAL:

Tsvetnyye metally, 1959, Nr 11, pp 55-60 (USSR)

ABSTRACT:

This work has been carried out in order to see whether
it is possible to determine more accurately the
specific surface of powders by using relatively simple
methods. The following gas porosity methods were
used: Carman's method, using Poiseil's system of gas
flow through a layer of powder, and B.V. Deryagin's
method with Knudsen's (molecular) system. The
results of the determination of the specific surface
area by the gas porosity methods were compared with
those of the methyl alcohol vapour adsorption method.
The low temperature adsorption of nitrogen method used
by Brunauer (Ref.1) was used as the control method for
the determination of the specific surface area of
powders of below 10 μ grain size. The specific surface
area of coarser powders was calculated from their

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SOV/136-59-11-12/26

Determination of the Specific Surface Area of Powders in the Production of Hard Alloys

granulometric compositions which can be determined by means of a microscope. In this article the practical results of the application of the four above methods for the determination of the specific surface area of powders in the manufacture of hard alloys are given. The determination of the specific surface area of H_2WO_4 , WO_3 , W, WC, TiO_2 ; TiCWC, Co powders and a VK6A mixture (mixture of WC and 6% Co powders) using Poiseil's system of gas flow across the specimen (in the form of a compressed tablet of powder) was carried out in an apparatus designed for the measurement for the specific surface area of powders by Carman's method. In practice the results of the determination of the specific surface area are usually converted to average diameter or grain size, assuming that the particles have a spherical shape. In Table 1, grain sizes of powders are shown for different porosities. The results of determination of the specific surface area of a few powders in the manufacture of hard alloys

Card 2/5

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SOV/136-59-11-12/26

Determination of the Specific Surface Area of Powders in the
Production of Hard Alloys

by Deryagin's method for different porosities and different weights are shown in Table 2. The results of determination of the surface area of H_2WO_4 , WO_3 , W, WC, TiO_2 , TiCWC, Co, VK6A powders by gas porosity methods, using Poiseill and Knudsen (Deryagin's instrument) systems of gas flow across the specimen, were compared with the results of adsorption determinations. Low temperature adsorption of nitrogen (BET method) was used as the control method (Table 3). The granulometric composition of tungsten W_{10} powder (small surface area, average diameter = 28μ) was determined by means of an optical microscope at a magnification of x600 (the determination of the specific surface area of such coarse powder by the nitrogen adsorption method is inaccurate). The results are shown in Table 4. The authors arrive at the following conclusions: 1. The method of nitrogen adsorption, although sufficiently accurate, cannot be widely used for the determination of the specific surface of powders because of its clumsiness and the complexity of its

Card 3/5

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SOV/136-59-11-12/26

Determination of the Specific Surface Area of Powders in the
Production of Hard Alloys

apparatus. Besides, any adsorption method giving the total surface area of particles gives an incorrect powder grain size value in the case of particles with internal pores. This method proved to be useful for the selection of a simpler and easier method, by comparing the values of specific surface obtained by this method with those obtained by other simpler methods. 2. It has been shown that the methods and instruments which are based on the filtration of air at atmospheric pressure and use Cozeni-Carman's formula, give incorrect lower values for the specific surface area of powders of high and medium dispersion. These methods can only be used for the determination of the specific surface area of coarsely dispersed powders. 3. The determination of the specific surface area of powders by the resistance to filtration of discharged nitrogen (Deryagin's method) is the most convenient. This method and the apparatus based on it, enable the external specific surface area of highly dispersed

Card 4/5

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SOV/136-59-11-12/26

Determination of the Specific Surface Area of Powders in the
Production of Hard Alloys

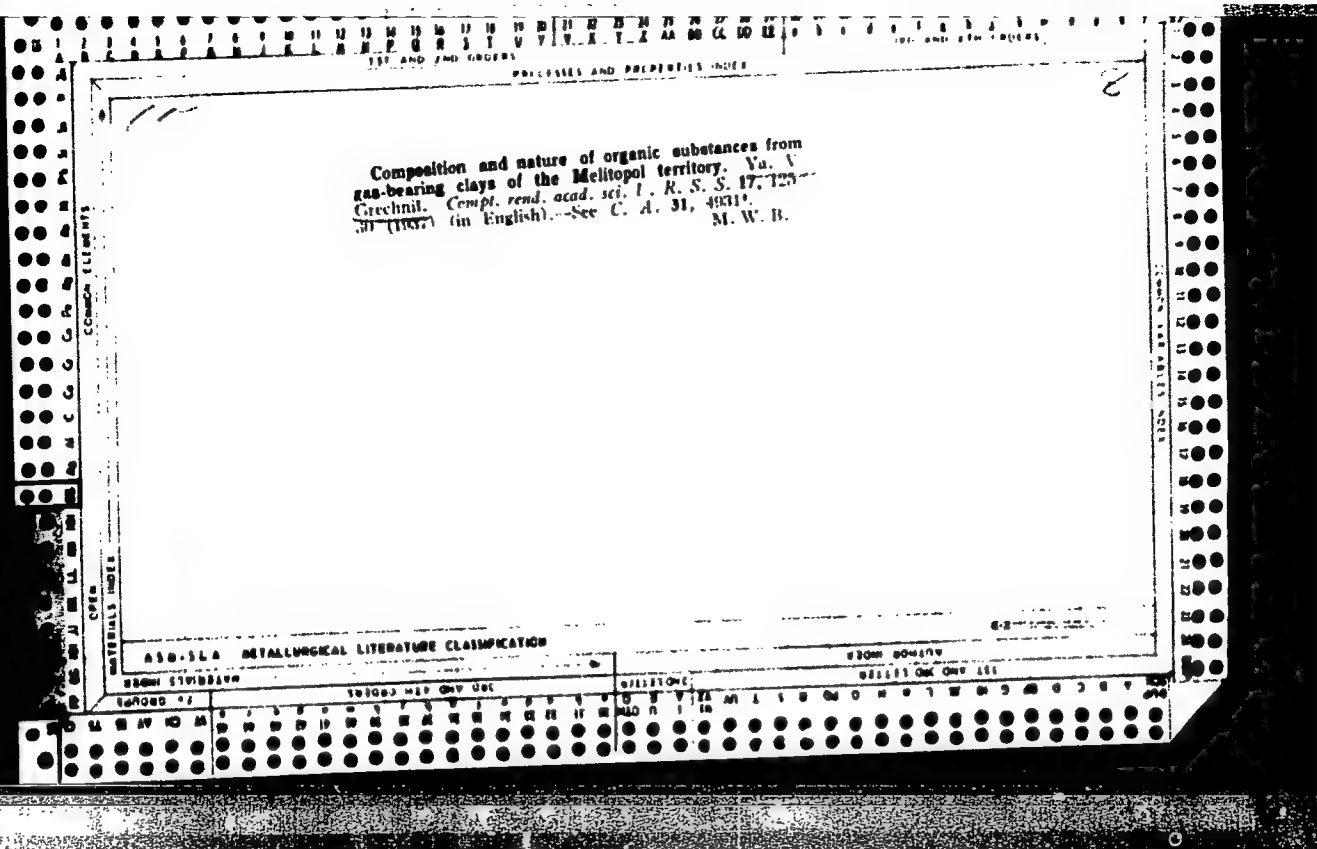
powders of hard alloys to be determined quickly and sufficiently accurately and the average particle size to be calculated. This is extremely important in the manufacture of hard alloys. This method is theoretically well-founded and in practice enables the external specific surface area of different powders of any degree of dispersion from a particle size of 100μ and less onwards, to be measured without limitation. Therefore this method can be successfully applied for the determination of the specific surface area and particle sizes of powders of hard alloys. There are 4 tables and 8 references, of which 6 are Soviet and 2 English.

Card 5/5

4

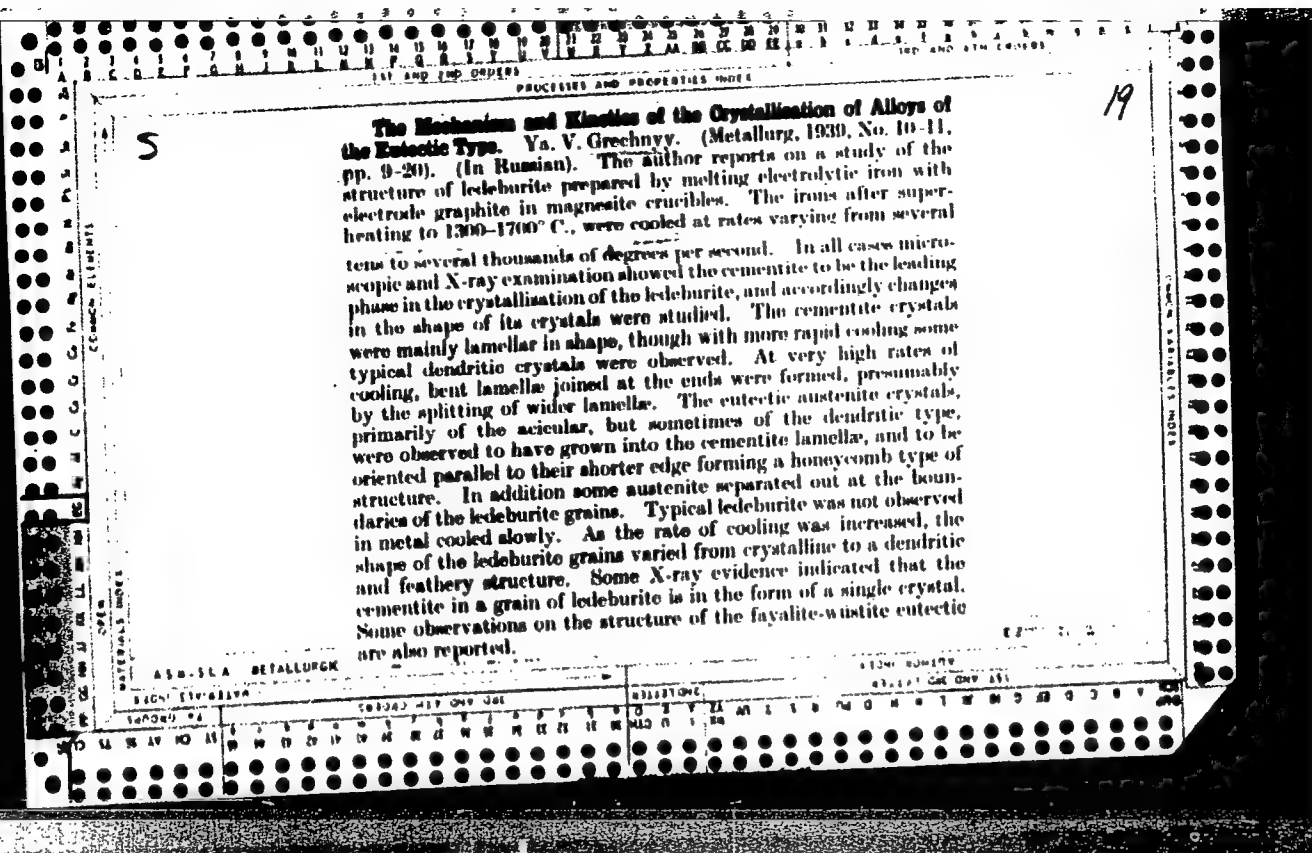
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>Petrochemical nature of the active deposits of Mariupol, in connection with their exploitation as raw materials in the silicate industry. Ya. Givshin. Ukrain. Akad. Nauk. 10, 57-65 (1965). Analytical and petrographical data are recorded. B. C. A.</p>																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
GROUPS										SUBGROUPS									
1 2 3 4 5 6 7 8 9 10										11 12 13 14 15 16 17 18 19 20									

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>Composition and nature of organic matter from the gas-bearing clays of the Molitopol district. A preliminary communication. Ya. V. Gorchakov. <i>Ukrain. Khim. Zhur.</i> 12, 64-71 (in English 71-2) (1937). The org. matter is spread throughout the whole thickness of the gas-bearing rock. Its compn. corresponds to humic coal. It has no gas formers such as cellulose and pectine material. The amt. of org. matter is lower in the Chokrak and Cymmerian sediments than in the Sarmatian sediments. No regularities were observed in the residual C content of the org. mass of the above-named sediments. The bitumens of all 3 sediments contain hydrocarbons, acids and resins. R. Z. Kamich</p>																																																			
<p>ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			



Geochemical data on the genesis of Melitopol gas deposits. Ya. V. Gorchun. *Ukrain. Akad. Nauk* 13, 101 (1938); *Ukr. C. A.* 32, 1215. The Melitopol gas deposits are genetically connected to the oil residues in the strata and are not the result of processes that occurred in deeper layers. R. Z. Kamich

ASB-51A DETAILING LITERATURE CLASSIFICATION



CA

Conditions of metastable equilibrium in binary alloys of eutectic type. Ye. V. Grechay (I. V. Stalin Metallurgical Inst., Dnepropetrovsk). *Tekhn. Akad. Nauk S.S.S.R.* 74, 369-61 (1960).—An expl. study was made of the eutectic systems camphor-benzoic acid, camphor- α -chloronitrobenzene, camphor-naphthalene, and azobenzene-piperonal which show no solid soly. A region of metastability exists in a restricted temp. range below the eutectic temp. In this region crystal. from the liquid does not occur instantly but is preceded by an incubation period. The lower limit of the region of metastability was detd. in the following manner since in these systems the solid phases do not nucleate one another. A drop of liquid of a given compn. was held in a thermostat and observed under the microscope to det. whether 1% of added solid phase would dissolve or grow. The data showed that in all cases the limits of metastability are given by extensions of the liquidus lines below the eutectic temp. to the limits of metastability of primary crystal. The method employed is not suitable for studying systems in which solid soly. occurs. A. G. Guy

1951

1855

The Probability of Formation of Crystal Nuclei in Binary
Melts of the Eutectic Type. Ye. V. Grechnev (Doklady Akad.
Nauk S.S.S.R., 1952, 84, (1), 83-85).—[In Russian]. The
dependence of the probability of formation of the nuclei of
each phase upon the concentration of the liq. soln. was in-
vestigated for various two-component systems of organic
compounds.—G. V. E. T.

07/11/52

GRECHNYY, YE. V.

USSR/Metallurgy - Binary Alloys, Crystal-
lization

Oct 52

"On the Crystallization of Eutectic Type Binary Alloys,"
Ya. V. Grechnyy, Dnepropetrovsk Metallurgical Inst
tment I. V. Stalin

"Dok Ak Nauk SSSR" Vol 86, No 5, pp 977-980

Studies crystallization of binary alloys, using meta-
stable equilibrium diagram on which, in addition to
curves of stable and metastable equilibrium, upper and
lower boundaries are plotted for metastability of liquid
before beginning of primary crystallization as well

as prior to beginning of eutectic crystal-
lization. Analyzes crystallization processes
for two groups: alloys of camphor with
paradibrombenzene and those of azobenzene
with piperonal. Results are tabulated. Sub-
mitted by Acad I. P. Bardin 8 Jul 52.

245127

USSR

✓ Influence of surface on graphitization of white iron.
K. P. Bunin, Ya. V. Grechnev, and N. M. Danil'chenko.
Lit'nos Proizvodstva 1955, No. 5, 12-15.—Already proposed
mechanisms of graphitization are reviewed (24 references),
and the effect of thickness, character of the surface, and of
H₂ content is detd. experimentally: Two induction furnace
irons deoxidized with 0.024% Al and contg. C 2.5, Si 0.91,
Mn 0.35, S 0.41, P 0.083, Cr 0.03% and C 2.41, Si 0.83, Mn
0.32, S 0.638, P 0.084%, resp., and a cupola iron with C
2.81, Si 0.66, Mn 0.50% were cast in 20 X 200-mm. bars at
1430° and graphitized at 930° in a mixt. of cast iron borings,
coal and graphite. Some of the cylinders were machined at
one end to a point and machining stresses eliminated by
anodic etching before graphitization. Heating 1 hr. at
930° showed that graphitization is not uniform throughout
the body of specimens, being facilitated at the surface and
retarded in the core. Dendritic structure of the iron has no
effect on its graphitization pattern. No relation was found
between the amt. of evolved H obtained in graphitization in
vacuum and the no. of formed graphite particles.

J. D. Gat

62
2

GRECHNYI, YA. V.
Category : USSR/Solid State Physics - Systems

E-4

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 1153

Author : Grechnyy, Ya.V.
Inst : Dnepropetrovsk Metallurgical Inst., USSR
Title : On Quasi Eutectic and Quasi-Eutectoid Structures.

Orig Pub : Izv. AN SSSR, Otd. tekhn. n., 1956, No 3, 77-91

Abstract : A proposal is made to study the formation of quasi-eutectic and quasi-eutectoid structures in binary alloys by starting out with the metastable crystallization diagrams of the alloys. Instead of containing the lines that are observed on the equilibrium diagrams, these diagrams contain regions, included between the upper boundary of the metastable liquid, on which the incubation period of the nucleation is infinite, and the lower boundary of metastability, on which the transformation takes place without incubation. Metastable diagrams of state were plotted for seven binary metal-like alloys of organic compounds. A procedure was outlined for an experimental investigation of the boundaries of metastability of liquid and the conditions of metastable equilibrium between liquids and crystals of the same phase. A metastable diagram of the recrystallization with eutectoid transformation was constructed, in addition, for one of the alloys.

Card : 1/1

~~SECRET~~
USSR/ Chemistry - Metallurgy
Card 1/2 Pub. 147 - 22/35
Authors : Grechnyy, Ya. V.
Title : Structure formation during eutectic crystallization of binary alloys
Periodical : Zhur. fiz. khim. 30/1, 184-189, Jan 1956
Abstract : A kinetic diagram analysis of eutectic transformations showed that eutectic crystallization leads to the formation of eutectic colonies the rate of nuclear formation of which is different for separate phases. A binary alloy component with greater tendency for overcooling forms the monocrystalline basis of such a colony. The causes leading to such eutectic colony structure are explained. It was established that the primary crystals of the phase
Institution : Dnepropetrovsk Metallurgical Inst. im. Stalin
Submitted : July 22, 1955

Card 2/2 Pub. 147 - 22/35

Periodical : Zhur. fiz. khim. 30/1, 184-189, Jan 1956

Abstract : which constitutes the monocrystal base of the eutectic colony are the initiators of the eutectic decomposition. The question on why one of the phases in the eutectic colony is monocrystalline and the second dispersed is debated. Eleven references: 10 USSR and 1 USA (1932-1952). Graph; illustrations.

GRECHNYI, Ya. V.

3
18-4E2C

not 12049* (Russian.) Methods of Investigating Cast Iron Graph-
itization Kinetics. K voprosu o metodike issledovaniia kin-
etiki grafizatsii chuguna. Ia. V. Grechnyi and N. M. Daniil'-
chenko. *Litetsnoe Proizvodstvo*, no. 3, Mar. 1957, p. 20-22.
dup Critical review of test methods.

RG amb

BUNIN, K.P.; GRECHNYY, Ya.V.; MALINCHKA, Ya.N.; TARAN, Yu.N.; BEL'CHENKO, G.I.;
POGREBNYY, E.N.; DANIL'CHENKO, N.M.; YATSENKO, A.I.; REPIN, A.K.;
BARANOV, A.A.; SHPAK, T.M.

Is metastable austenite possible at a point higher than A_1 ?
Izv.vys.ucheb.zav.; chern.met. no.10:143-144 0 '58.

(MIRA 11:12)

1. Dnepropetrovskiy metallurgicheskiy institut i Institut chernoy
metallurgii AN USSR.

(Austenite) (Phase rule and equilibrium)

SOV/128-58-12-8/21

AUTHORS: Grechnyy, Ya.V. and Kheyfets, I.G.

TITLE: The Importance of the Surface in the Graphitization of Iron Alloys (O roli poverkhnosti pri grafitizatsii zheleznykh splavov)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 12, pp 14 - 17 (USSR)

ABSTRACT: With reference to existing debatable data on the graphitization of white iron, which is supposed to depend on the migration of vacancies and the specimen surface, special tests were performed with two-layer specimens coated with chrome cast-iron. The tests, which are described in detail, proved that retardation of graphitization depended on the reduced migration rate of vacancies from the surface through the layer of chrome cast-iron. The conclusion is drawn that the effect of chromium on graphitization kinetics in iron-carbon alloys is connected with the reduced rate of vacancy diffusion, and that the experiments confirm the existing theory of the importance of the specimen surface as the source of vacancies indispensable for the graphitization

Card 1/2

SOV/128-58-12-8/21

The Importance of the Surface in the Graphitization of Iron Alloys

process in such alloys. The described method is recommended for determining the interdependence between the rate of graphitization, vacancy diffusion, and the effect of the alloying element. There are 7 microphotos, 1 diagram, 1 table and 10 references, 6 of which are Soviet and 4 English.

Card 2/2

GRECHNYY, YA. V., Doc TECH SCI, "CRYSTALLIZATION OF
DOUBLE ALLOYS." KIEV, 1961. (MIN OF HIGHER AND SEC
SPEC ED UKSSR. KIEV ORDER OF LENIN POLYTECH INST).
(KL-DV, 11-61, 216).

-100-

BARANOV, A.A.; GRECHNYY, Ya.V.; Primali uchastiye: MOVCHAN, V., student;
NEBORAK, P., student; PIROGOV, V., student

Coalescence of graphite. Lit. proizv. no.5:25-28 My '62. (MIRA 16:3)
(Cast iron--Metallurgy)

L 18906-63

EWI(d)/EWP(j)/EPF(c)/EWP(q)/EWT(m)/BDS ASD Pc-4/

Pr-4 RM/JD/MAY

ACCESSION NR: AT3001907

S/2912/62/000/000/0145/0156

AUTHOR: Grechny'y, Ya. V.

TITLE: Crystallization of alloys of the peritectic type.

SOURCE: Kristallizatsiya i fazovyye perekhody*. Minsk, Izd-vo AN BSSR, 1962, 145-156.

TOPIC TAGS: crystal, crystallization, crystallography, peritectic, alloy, reaction, phase diagram, equilibrium, kinetic, equilibrium-kinetic, parachloriodobenzene, paradiiodobenzene.

ABSTRACT: The paper sets forth the theoretical concepts of the mechanism of peritectic transformation and describes experiments with alloys of the peritectic type, as a result of which an experimentally constructed equilibrium-kinetic phase diagram (EKPD) is drawn. In addition to the usual parameters of a phase diagram, the EKPD contains a time parameter. From the analysis of the EKPD it follows that the crystallization of alloys of the peritectic type can take place without peritectic reaction. The experimentation substantiates this conclusion. The experimentation was performed with alloys of parachloriodobenzene (P1) and paradiiodobenzene (P2). The investigation was performed with the aid of a microscope (equipped

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L 18906-63

ACCESSION NR: AT3001907

with a thermostat) in which a laminar film of the alloy was placed between a base and a cover glass. The specimens were used to determine the waiting time until the appearance of the first crystals in the initial liquid or the mixture consisting of liquid and crystals of one of the solid solutions of the second solution. The waiting time yielded the crystallization-incubation period as a function of the intensity of supercooling. Depending on the initial chemical composition and the cooling regime, the crystallization of alloys of the peritectic type may develop either in a single or in two stages. In the first instance, nonselective crystallization of the initial liquid takes place with the formation of a homogeneous solid solution; in the second instance, a sequential crystallization of both solid solutions proceeds. Spontaneous crystallization of alloys of P1 and P2 for any given cooling regime occurs without the realization of a peritectic reaction. In order to evoke a peritectic transformation in these alloys, primers must be introduced into the alloys. Orig. art. has 6 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 16Apr63

ENCL: 00

SUB CODE: CH, PH, MA.

NO REF SOV: 004

OTHER: 002

Card 2/2

L 18905-63 EWP(j)/EWT(l)/EPF(c)/EWT(m)/BDS AFFTC/ASD/ESD-3
Pc-4/Pr-4 RM/MAY/WW

ACCESSION NR: AT3001908

S/2912/62/000/000/0156/0168

AUTHOR: Grechny^y, Ya. V.

TITLE: On the Nonselective nucleation and growth of crystals of a solid solution

SOURCE: Kristallizatsiya i fazovyye perekhody*. Minsk, Izd-vo AN BSSR, 1962, 156-168

TOPIC TAGS: crystal, crystallization, crystallography, nucleation, solid, nucleus, solution, nonselective, growth, phase diagram, kinetic diagram, selective

ABSTRACT: The paper describes an experimental construction of phase diagrams that describe the conditions of equilibrium and that contain a time parameter, that is, that comprise within themselves both equilibrium and kinetic phase diagrams for binary alloys forming a solid solution. The basic investigations were performed on transparent substances having elevated rates of nucleus formation and of crystal growth, so that they can be reduced into an amorphous state only with exceedingly great difficulty, and which, hence, are metal-like with respect to crystallization. It is, therefore, postulated that the results of the investigations described in this paper are also valid for alloys consisting of metals. Three systems were investigated. In the camphor-borneol (K-B) system, the components

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have unlimited solubility; in the systems camphor-hydroquinone¹ (K-HQ) and para-chloronitrobenzene-parabromonitrobenzene³ (PC-PB) the components have limited solubility. Crystallization was observed under a 20x magnifier and a thermostatically-controlled microscope in capillary or thin planar containers. The crystallization-incubation period was obtained from the waiting time to the appearance of the first visible crystal, T , minus the thermal-inertia time of the specimen, t_1 , and the time required for the first crystal to grow to visible dimensions, $t_2 = R/v$, where R is the minimal dimension of a visually discernible crystal and v is the rate of growth of crystals. The mean value of the incubation time was obtained from frequency curves derived from as many as 200 determinations at a given temperature (T). Tests for a variety of compositions and degrees of supercooling served to determine that degree of supercooling at which the rate of nucleation or the incubational period remained the same for alloys of different composition. These tests resulted in the plotting of a T -vs.-composition graph with isoprobability (isoincubation) curves. Inasmuch as this diagram contains the time parameter, it can be expanded into an isometrically drawn three-component diagram to show the effect of time explicitly. The practical utilization of such diagrams for the interval of metastability is explained. The crystallization of the solid solutions for the three solutions investigated is described. Three groups of alloys are distinguished according to the character of the respective arrangement of the solidus

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and the boundaries of metastability (BoM). Group 1: Alloys in which both BoM lie below the solidus. Group 2: Alloys in which the solidus lies between the BoM. Group 3: Alloys with both BoM above the solidus. All K-B alloys pertain to group 1, the K-HQ alloys may pertain to any one of the 3 groups, and the PC-PB alloys can pertain to either group 1 or group 2. In the PC-PB alloys the upper BoM, and in the K-HQ alloys the lower BoM as well, consist of two portions: The portions of the BoM that lie below the solidus are displaced downward with respect to the portions of the corresponding BoM lying above the solidus. The curves of the dependence of the incubation period vs. the degree of supercooling, for alloys of the second group, consist of two branches, of which the left branch is steeper than the right. The end product of this study is the finding of the line of metastable equilibrium (LME) of liquid and solid solutions of identical composition, which is based on the reasoning that in the passing from selective to nonselective crystallization an increase in the rate of the growth of the crystals of the solid solution must follow, a fact that is attributable to the exclusion, in this transition, of the diffusion components (that is, the slowest terms) from the elementary crystal-growth process. This break in the curves is indeed found, and the point of discontinuity is stated to be a point on the LME. It was established that in rapidly cooled planar specimens, in which a thin film of the liquid under investigation was placed between two coverglasses, total crystallization of the initial liquid was temporarily

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observed at T above the solidus but below the LME. With further isothermal holding a partial fusion of the solid solution occurred. This experimentally established fact appears to be a direct proof of the realization of nonselective crystallization of solid solutions. Orig. art. has 6 figures.

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OTHER: 001

Card 4/4

GRECHNYI, Ya.V.; LENCHENKO, N.A.

Effect of hydrogen and nitrogen on the graphitization of ~~white~~
~~cast~~ iron. Izv. vys. ucheb. zav.; ~~chern. met.~~ 5 no.5:153-160
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gosudarstvennyy universitet.

(Cast iron--Metallography)
(Gases in metals)

ZAKORA, P. F.; GRECHNYY, Ya. V.; PANIOTOV, Yu. S.; RUDOY, L. S.;
LAPITSKIY, V. I., prof., doktor tekhn. nauk, rukovoditel'raboty

Changes in the homogeneity of basic slag during the scrap process
and its effect on the desulfuration of the metal. Izv. vys.
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Determining the degree of texturization of transformer steel.
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CHUYKO, N.M.; GRECHNYY, Ya.V.; GALITSKIY, Yu.P.; SHMYREV, I.P.; VGOB'YEV, G.M.

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temperatures. Izv. vys. ucheb. zav.; chern. met. 7 no.10:
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VCROB'YEV, G.M.; GRECHNYY, Ya.V.; KOTOVA, L.I.; SEFENEV, I.P.

Comparison of various methods of measuring the textural
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ZHUKOV, A.S.; GRECHUK, A.I.; BICHURIN, R.T.

Quick-change patterns for machine molding. Lit. proizv. no.8:
36 Ag '63. (MIRA 16:10)

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(MEDICAL PERSONNEL)

ZAYTSEV, P.I.; LIZOGUB, I.G.; PETRUKOVICH, A.A., zasl. deyatel'
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[Mechanization of the assembly, laying and exchange of
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NOSENKO, A.Ye. [Nosenko, A.IE.]; GRECHUKH, Z.G. [Hrechukh, Z.H.]

Optical properties of mercury sulfide. Ukr. fiz. zhur. 8 no.8:
913-915 Ag '63. (MIRA 16:11)

1. L'vovskiy gosudarstvennyy universitet im. Iv. Franko.

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AUTHOR: Bilen'kyi, B. F. (Bilen'kiy, B. F.); Hrechukh, Z. H. (Grechukh, Z. G.);
Nosenko, A. Ye.; Pashkova'kyi, M. V. (Pashkovskiy, M. V.) 38

TITLE: Some optical properties of mercury sulfide B+1

SOURCE: L'vov. Universitet. Pytannya fizyky tverdogo tila (Problems in solid
state physics). L'vov, Vyd-vo L'viv. univ., 1964, 84-86

TOPIC TAGS: mercury sulfide, thallium activation, absorption spectrum, reflection
 spectrum, diffuse reflection, impurity absorption

ABSTRACT: The authors investigated some optical properties of powdered samples of the red modification of mercury sulfide, especially the influence of the dimensions of the microcrystals, of the temperature, and of admixtures of copper, iodine, and thallium on the diffuse reflection spectrum. The powder particles ranged in size from 1.5 to 0.05 mm. The impurities are introduced into the crystal during the growth. The absorption spectrum of microcrystals α_{HgS} and $\alpha_{HgS}(Tl)$ in the near infrared regions was also investigated. The diffuse reflection spectrum in the visible region was measured relative to magnesium oxide with an SF-10 photospectro-

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meter. A dependence on the particle size was observed in this spectrum, the larger reflectivity being possessed by samples having larger microcrystals in the short-wave region, and with the situation reversed in the long-wave region. Furthermore, a considerable increase takes place in the long-wave region when the dimensions of the microparticles are increased. The results are illustrated in Figs. 1 and 2 of the Enclosure. The transmission spectrum of $\alpha\text{HgS(Tl)}$ has shown a relatively broad band near 1.6 μm , which was not observed in the αHgS spectrum, which together with the 1.4 μm band in the diffuse reflection spectrum of $\alpha\text{HgS(Tl)}$ can possibly be ascribed to impurity absorption. "The authors thank I. V. Savyts'kiy (Savitskiy) for growing the samples." Orig. art. has: 3 figures.

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GRECHUKHA, G.M.

LEVIN, A.M.; GRECHUKHA, G.M.

Utilizing of methane from mines. Gaz.prom.no.8:31-34 Ag '57.

(MIRA 10:7)

(Methane)

GRECHUKHA, G.M.

Utilization of mine gases in the Donets Basin. Gaz. prom. no.8:
4-7 Ag '58. (MIRA 11:8)
(Donets Basin--Mine gases)

GRECHUKHA, G.M. [Hrechukha, H.M.]

Out-of-town Session of the Department of Technical Sciences of
the Academy of Sciences of the Ukrainian S.S.R. Dop. AN ~~USSR~~
no.4:555-557 '62. (MIRA 15:5)

(Ukraine--Research)